General

Power	+5VDC from pin 9 of the VGA input of a PC that complies with VESA DCC version 3
Or	100VAC to 240VAC, 50/60 Hz, 5 watt, external, autoswitchable; to 12VDC, 1A power supply. P/2 DA2xi and P/2 DA2xi MT require 0.2A.
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	Yes, with optional 1U VersaTools rack shelf, part #60-190-20 or Universal rack shelf, part #60-190-01
Enclosure type	Metal
Enclosure dimensions	1" H x 4.3" W x 3" D 2.5 cm H x 10.9 cm W x 7.6 cm D (Depth excludes connectors.)
Product weight	0.5 lbs (0.3 kg)
Shipping weight	3 lbs (1.4 kg)
Vibration	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE *Specifications are subject to change without notice.*

FCC Class A Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

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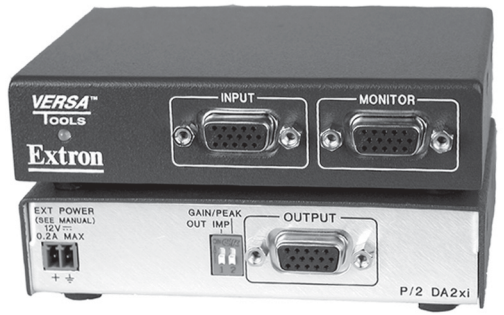
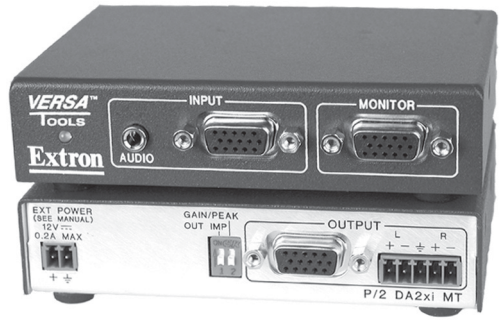
Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

User's Guide





P/2 DA2xi
P/2 DA2xi MT

Distribution Amplifiers

68-713-01 **Rev. C**
Printed in the USA
06 03

The P/2 DA2xi and the P/2 DA2xi MT are distribution amplifiers that accept video input from a VGA, XGA, or UXGA compatible PC and distribute the signal to separately buffered outputs. Each output can be extended with Extron VGA Mini-HR cables from 6' to 250' in length. The MT model also has audio input and output.

Both models can be powered by newer computers compatible with the new VESA standard using pin 9 of the VGA connector as the +5VDC source. An external power supply is also provided for use with older computers, where power is unavailable through the VGA connector or the available power is inadequate.

Features

- **Powered by computer —** This unit can be powered by most newer computers.
- **Power/Signal LED —** Green LED = power + signal. Amber LED = power but no signal. Off = no power.
- **Gain/Peak DIP switch —** To compensate for longer cable runs.
- **Out Imp DIP switch —** Changes the output impedance to be compatible with all projectors.
- **Cable retention chain —** To prevent a lost or misplaced input VGA cable, the cable can be secured to the unit (either model) with the supplied chain (attached to the right standoff nut of the input VGA connector).

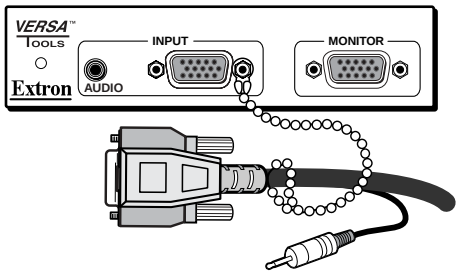


Figure 1 — P/2 DA2xi MT with chain

Installation

The P/2 DA2xi and P/2 DA2xi MT can be mounted on a rack shelf, under a desk or tabletop, or on a projector bracket.

Rack mounting

For optional rack mounting, mount the P/2 DA2xi or P/2 DA2xi MT on a VersaTools 19" 1U Rack Shelf (part #**60-190-20**) or a standard Universal 1U Rack Shelf (part #**60-190-01**) as shown in figure 2.

NOTE *Only products in the VersaTools line can be mounted to a VersaTools rack shelf.*

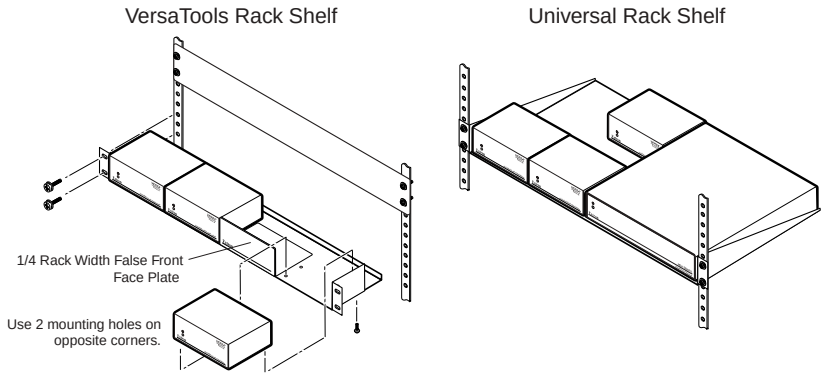

VersaTools Rack Shelf
Universal Rack Shelf
1/4 Rack Width False Front Face Plate
Use 2 mounting holes on opposite corners.

Figure 2 — Mounting the P/2 DA2xi or P/2 DA2xi MT on a rack shelf

1. Remove the rubber feet (if installed) and mount the unit on the rack shelf, using two screws in opposite (diagonal) corners.
2. Install blank panel(s) or other unit(s) to the rack shelf.
3. Insert the shelf into the rack, and secure the shelf to the rack using the supplied machine screws.

Furniture or projector mounting

Furniture mount or projector mount the unit using the mounting kit (part #**70-077-01**, furniture [optional with the P/2 DA2xi, standard with P/2 DA2xi MT] or **#70-077-04**, projector [optional with both units]) as follows:

1. Attach the mounting brackets to the P/2 DA2xi or P/2 DA2xi MT with the provided machine screws (figure 3).

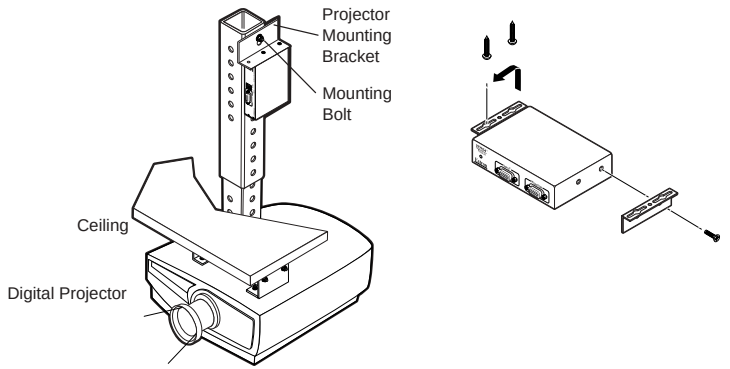


Figure 3 — Desk and projector mounting

2. If feet were previously installed on the bottom of the unit, remove them.
3. **For furniture mounting,** hold the unit with the attached brackets against the underside of the table or other furniture. Mark the location of the screw holes of the bracket on the mounting surface.
4. **For furniture mounting,** drill 3/32" (2 mm) diameter pilot holes, 1/4" (6.3 mm) deep in the mounting surface at the marked screw locations.
5. **For furniture mounting,** insert #8 wood screws into the four pilot holes. Tighten each screw into the mounting surface until just less than 1/4" of the screw head protrudes.
6. **For furniture mounting,** align the mounting screws with the slots in the brackets and place the unit against the surface, with the screws through the bracket slots.
7. **For furniture mounting,** slide the receiver slightly forward or back, then tighten all four screws to secure the unit in place.
8. **For projector mounting,** secure the unit to a projector mount or other surface by inserting the mounting bolt through the bracket's slotted hole.

Connections, Indicators, and Controls

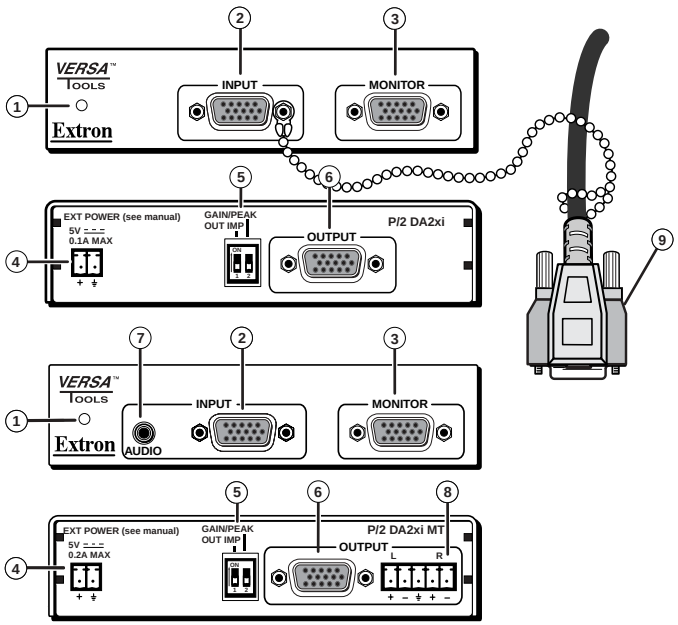


Figure 4 — Front and rear panels

(1) **Power/Signal indicator LED** — When illuminated green, this LED indicates that the distribution amplifier is receiving both power and a computer signal. When illuminated amber, it indicates that the distribution amplifier is receiving power but no computer signal. If the LED is off when the distribution amplifier is connected to a PC with power on, it indicates that an external power supply is required.

(2) **Video Input connector** — Connect a computer's VGA - UXGA output to this connector.

(3) **Monitor connector** — Connect a local monitor to this connector.

(4) **Power connector —** Plug the external 12V power supply, **only when needed** (see *Power/Signal indicator LED* above), into this 2-pole captive screw connector. The power supply is included with the unit and is shipped with a plug installed. If you need to cut the power cord to a different length and reinstall the plug, refer to figure 5 and the following notes.

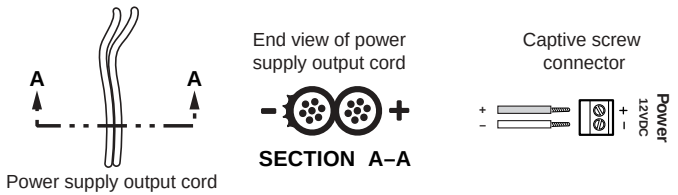


Figure 5 — Power connector wiring

CAUTION *When connecting the power supply, voltage polarity is extremely important. Applying power with incorrect voltage polarity could damage the power supply and the amplifier. Identify the power cord negative lead by the ridges on the side of the cord.*

NOTE *Do not tin the stripped power supply leads before installing the captive screw connector. Tinned wires are not as secure in the captive screw connectors and could pull out.*

WARNING *The two power cord wires must be kept separate while the power supply is plugged in. Remove power before continuing.*

To verify the polarity before connection, plug in the power supply with no load and check the output with a voltmeter.

(5) **2-bank DIP switch —** (These switches only affect the video output [(6)], not the "monitor" output [(3)]). The **Gain/Peak** DIP switch should be on (up) when output cable is over 100' (30.5 m). The **Out Imp** DIP switch changes output

impedance. If all connections and operations are correct, yet the output device has no picture, switch to the other position.

6 **Video output connector —** Connect the video output device, such as a projector, LCD panel, or monitor, to this connector.

7 **Audio input connector (MT model only) —** Plug a 3.5 mm, mini jack audio cable from the computer's sound card into this connector.

8 **Audio output connector (MT model only) —** Insert a 3.5 mm, 5-pole, captive screw audio connector into this connector. Wire the connector as shown below.

Figure 6 — Audio connector wiring

CAUTION *Connect the sleeve to ground (Gnd). Connecting the sleeve to a negative (-) terminal will damage the audio output circuits.*

9 **Local monitor cable assembly —** Use this cable assembly to connect the local monitor (video) and speaker (audio) to the unit. The chain is used to attach the cable to the unit, to prevent the cable from being lost or misplaced.

Specifications

Video

Gain	Unity (0dB), or (1.1dB) 110%, switch-selectable (When input = 0.7V, output = 0.7V or 0.8V, respectively.
Peaking	Selectable: 0dB or 6dB @ 100 MHz
Bandwidth	350 MHz (-3dB)

Video input

Number/signal type	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors	(1) 15-pin HD female
Nominal level	0.7V p-p for RGB
Minimum/maximum levels	Analog, 0.3V to 1.5V p-p
Impedance	75 ohms
Horizontal frequency	15 kHz to 135 kHz
Vertical frequency	30 Hz to 170 Hz
Return loss	<-38dB @ 5 MHz
Maximum DC offset	1.0V
AC/DC coupling	No

Video output

Number/signal type	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs output
	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs local monitor loop-through (ID bits are passed)
Connectors	(2) 15-pin HD female
Nominal level	0.7V p-p for RGB
Minimum/maximum levels	Analog, 0.3V to 1.5V p-p
Impedance	75 ohms
Return loss	<-40dB @ 5 MHz
DC offset	±5mV maximum with input at 0 offset

Sync

Input type	RGBHV, RGBS, RGsB, RsGsBs
Output type	RGBHV, RGBS, RGsB, RsGsBs
Min/Max Input level	1.5V to 5.0V p-p
Output level	TTL, 4V to 5V p-p unterminated
Input impedance	510 ohms
Output impedance	75 ohms or 55 ohms, switchable (output impedance resistors are 50 or 30 ohms)
Max. propagation delay	60 ns
Max. rise/fall time	4 ns
Polarity	Positive or negative (follows input)

Audio (P/2 DA2xi MT only)

Gain	Unbalanced 0dB, balanced +6dB
Frequency Response	20Hz to 20kHz, ±0.05dB
THD + Noise	<0.03% @ 1kHz at nominal level
S/N	>90dB, balanced at rated max output drive
Crosstalk	<-80dB @ 1kHz, fully loaded
Stereo channel separation	>80dB @ 1kHz; >60dB @ 20kHz
CMRR	>67dB @ 20Hz to 20kHz

Audio input (P/2 DA2xi MT only)

Number/signal type	1 stereo, unbalanced
Connectors	(1) 3.5 mm female stereo jack, 2-channel; tip (L), ring (R), sleeve (Gnd)
Impedance	>18 kohms unbalanced, DC coupled
Nominal level	-10dBV (316mV)
Maximum level	>+10dBV (3.16V) at 1% THD + N

Audio output (P/2 DA2xi MT only)

Number/signal type	1 stereo, balanced/unbalanced
Connectors	(1) 5-pin 3.5 mm captive screw connector
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Nominal level	-2dBu (632mV) balanced out -10dBV (316mV) unbalanced out
Maximum level (Hi-Z)	>+15dBu (4.36V), balanced at 1% THD+N, with external power supply
Maximum level (600 ohms)	>+9dBm (2.18V), balanced at 1% THD+N, with external power supply

NOTE *0dBu = 0.775V, 0dBV = 1.0V*